

Standard Operating Procedure

Great Salt Lake Water Quality Studies

Volatile Selenium

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1.1 Purge Vessel Preparation

(This step should be done in the lab prior to going into the field)

1. Put on powderless Nitrile gloves.
2. Place glass purge vessel in 5% HNO₃ and soak for a minimum of two hours.
3. Rinse purge vessel three times in de-ionized water (DIW), place in plastic bag.

1.2 Sample Collection

(In the field)

1. Place the purge vessel inside a clean plastic bucket with sides higher than the vessel.
2. Place the sample intake hose of the pump in the site and depth to be sampled.
3. After purging three line volumes, place the exit hose of the pump inside the purge vessel.
4. Turn on the pump.
5. Fill the vessel and allow the water to overflow the bottle and overflow the bucket. Allow at least 3 volumes of water to fill and overflow the bottle.
6. Under water, place the lid on the purge vessel.

1.3 Purge and Trap System

(In the field)

1. Install a new Chromosorb trap in the purge and trap system.
2. Connect the Ar gas line to the sparging system.
3. Check that all the connections are in place. Check that the cryogenic baths (ice+acetone and liquid nitrogen) are full.
4. Open the Ar valve.
5. Purge the sampled water at 300 mL/min for 1 hour.

6. Close the Ar valve
7. Using a hand vacuum pump and a torch, flame seal the ends of the trap.
8. Place the trap inside of Dewar with liquid nitrogen.